

Linear Regression: Check Your Understanding

Before going on to the lab, here are some additional practice questions that you can use to check your understanding of linear regression.

QUESTION 1 OF 4

Which of the following statements about linear regression are **incorrect**?

(Select all that apply.)

- ☒ A general equation like  $y = mx + b$  is a model
- ☒ Simple linear regression uses a *plane* to describe relationships between variables
- ☐ Multiple linear regression involves more than one input variable
- ☐ Linear regression assumes that the input variables and output variable follow a linear relationship

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QUESTION 2 OF 4

One of the things that can be difficult when looking at a machine learning algorithm is that different terms and symbols are often used to refer to the same (or very closely related) things.

With that in mind, can you match the following terms?

Submit to check your answer choices!

LINEAR REGRESSION	MACHINE LEARNING
slope	coefficient
intercept	bias
RMSE	cost function

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QUESTION 3 OF 4

Which of the following about training a linear regression model is correct?

(Select all that apply.)

- ☒ The training process is a process of *minimizing the error*
- ☒ A *cost function* is used to calculate the error of a model
- ☐ A linear regression model will not change much if outliers are removed
- ☐ It is not necessary to remove highly correlated input variables when training a model
- ☒ It is always a good idea to rescale data

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QUESTION 4 OF 4

Which one of the following is not necessary when preparing data for a linear regression model?

- ☐ Remove noise
- ☐ Make sure the input variable(s) and output variable follow a linear relationship
- ☐ Remove collinearity
- ☒ Make sure the error is minimized.

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NEXT